

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-36. (Canceled) Please cancel claims 1-36.

37. (New) An isolated polynucleotide encoding a non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor, wherein the wild-type G protein-coupled receptor comprises SEQ. ID. NO: 2, SEQ. ID. NO.: 4, SEQ. ID. NO.: 6, SEQ. ID. NO.: 8, SEQ. ID. NO.: 10, SEQ. ID. NO.:12, SEQ. ID. NO.:14, SEQ. ID. NO.: 16, SEQ. ID. NO.: 18, or SEQ. ID. NO: 98.

38. (New) An isolated polynucleotide according to claim 37, wherein said polynucleotide encodes an amino acid sequence that comprises SEQ. ID. NO.: 63, SEQ. ID. NO.: 65, SEQ. ID. NO.: 67, SEQ. ID. NO.: 69, SEQ. ID. NO.: 71, SEQ. ID. NO.: 73, SEQ. ID. NO.: 75, SEQ. ID. NO.: 77, SEQ. ID. NO.: 79, SEQ. ID. NO.: 81, SEQ. ID. NO.: 83, SEQ. ID. NO.: 85, or SEQ. ID. NO.:87.

39. (New) An isolated polynucleotide according to claim 38, wherein the polynucleotide comprises SEQ. ID. NO: 62, SEQ. ID. NO.: 64, SEQ. ID. NO.: 66, SEQ. ID. NO.: 68, SEQ. ID. NO.: 70, SEQ. ID. NO.:72, SEQ. ID. NO.:74, SEQ. ID. NO.: 76, SEQ. ID. NO.: 78, SEQ. ID. NO.: 80, SEQ. ID. NO.: 82, SEQ. ID. NO.:84, or SEQ. ID. NO: 86.

40. (New) A vector comprising a polynucleotide according to any one of claims 37 to 39.

41. (New) A vector according to claim 40, wherein said vector is an expression vector.

42. (New) A host cell comprising an expression vector according to claim 41.

43. (New) A process for making a recombinant host cell comprising the steps of:
(a) transfecting an expression vector according to claim 41 into a suitable host cell; and
(b) culturing the host cell under conditions which allow expression of a G protein-coupled receptor from the expression vector.
44. (New) A membrane of a recombinant host cell produced by the process of claim 43 comprising said G protein-coupled receptor.
45. (New) An isolated non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor, wherein the wild-type G protein-coupled receptor comprises SEQ. ID. NO.: 2, SEQ. ID. NO.: 4, SEQ. ID. NO.: 6, SEQ. ID. NO.: 8, SEQ. ID. NO.: 10, SEQ. ID. NO.: 12, SEQ. ID. NO.: 14, SEQ. ID. NO.: 16, SEQ. ID. NO.: 18, or SEQ. ID. NO.: 98.
46. (New) An isolated non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor according to claim 45, comprising SEQ. ID. NO.: 63, SEQ. ID. NO.: 65, SEQ. ID. NO.: 67, SEQ. ID. NO.: 69, SEQ. ID. NO.: 71, SEQ. ID. NO.: 73, SEQ. ID. NO.: 75, SEQ. ID. NO.: 77, SEQ. ID. NO.: 79, SEQ. ID. NO.: 81, SEQ. ID. NO.: 83, SEQ. ID. NO.: 85, or SEQ. ID. NO.: 87.
47. (New) A method for identifying a candidate compound as a modulator of a non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor, wherein the wild-type G protein-coupled receptor comprises SEQ. ID. NO.: 2, SEQ. ID. NO.: 4, SEQ. ID. NO.: 6, SEQ. ID. NO.: 8, SEQ. ID. NO.: 10, SEQ. ID. NO.: 12, SEQ. ID. NO.: 14, SEQ. ID. NO.: 16, SEQ. ID. NO.: 18, or SEQ. ID. NO.: 98, said method comprising the steps of:
(a) contacting said candidate compound with a host cell that expresses said non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor, or a membrane thereof; and
(b) measuring the ability of said candidate compound to inhibit or stimulate functionality of said non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor,
wherein ability to inhibit or stimulate functionality of said non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor identifies said candidate compound as a modulator.

48. (New) A method for identifying a candidate compound as a modulator of a non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor according to claim 47, wherein said non-endogenous, constitutively activated version of a wild-type G protein-coupled receptor comprises SEQ. ID. NO.: 63, SEQ. ID. NO.: 65, SEQ. ID. NO.: 67, SEQ. ID. NO.: 69, SEQ. ID. NO.: 71, SEQ. ID. NO.: 73, SEQ. ID. NO.: 75, SEQ. ID. NO.: 77, SEQ. ID. NO.: 79, SEQ. ID. NO.: 81, SEQ. ID. NO.: 83, SEQ. ID. NO.: 85, or SEQ. ID. NO.: 87.

49. (New) A method for treating hypo-myelination in an individual in need of said treating, comprising administering to said individual an agonist of GPR37 or ETBR-LP2.

50. (New) A method for treating colorectal cancer in an individual in need of said treating, comprising administering to said individual an inverse agonist of GPR35.